Back to Basics

The Purpose of Carbon Markets and What they Value: What?, Why?, How?

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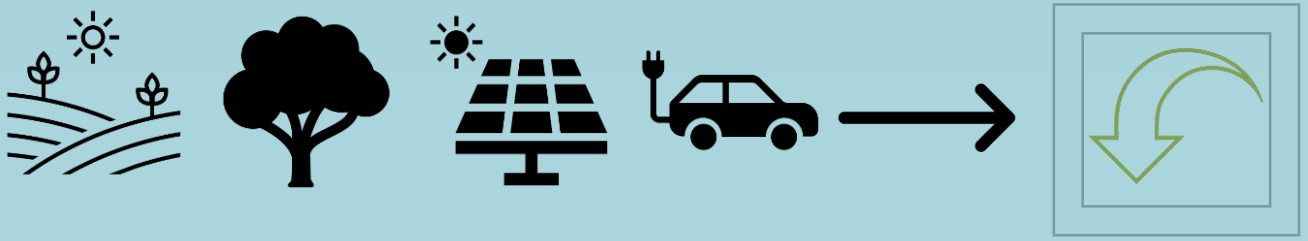
<u>What</u> Do Carbon Markets Value? :

- Carbon credits / offsets are measures in tonnes of carbon dioxide (or carbon dioxide equivalent). 1 tonne of CO2 / CO2e = 1 Credit / Offset

- This ‘unit’ represents either one metric ton of CO2 **removed** from the atmosphere (carbon sequestration/ removal) or **saved from being emitted** (emissions reduction/avoidance)

- Quantifies and values the relative change / reduction in greenhouse gases in relation to a baseline



Why? Rationale to enable and allow trading

- **Complimentary / suplementary to decarbonistion efforts and actions**
- **Cost efficiency** – *least cost* rationale
- **Enabling investment anywhere** – reducing constraint of investment to a specific jurisdiction
- **Support for developing countries** - sustainable development co-benefits
- **Cooperative approaches** - scalability
- **The market as a driver-** markets are driven by demand – demand is driven by commitments to reduce emissions, demand drives supply (Paris Agreement /national policy and law)
- Government led mechanisms allow governments to better enforce emissions reduction targets
- The voluntary market allows trading between a range of stakeholders – allows investment to occur without dependancy on Government

CARBON MARKET ORIGINS AND HISTORY

Clean Development Mechanism (Article 12 – Kyoto Protocol)

The mechanism allowed Parties to implement carbon abatement projects in a developing countries in exchange for units called certified emission reductions (CERs) which could be used towards the achievement of their emissions reduction commitments.

The rationale behind the CDM is that emission reductions should be **undertaken where the reductions cost the least,** as greenhouse gas emissions abatement is a global public good

- Notes that the geographical location of emission reductions does not matter for the global stock of GHG.

- Economic rationale of efficiency but had various issues in relation to responsibility, verification, legitimacy etc.
- Developed => Developing Countries
- **The CDM more or less collapsed in 2012**

- Adopt more ambitious rules to improve the environmental integrity of credits in future mechanisms
- Design future mechanisms with good social and environmental safeguards, including rules for stakeholder consultations and a grievance mechanism

2015 – PARIS AGREEMENT

- **Article 6**

1. Parties recognize that some Parties choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity.
2. Parties shall, where engaging on a voluntary basis in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards nationally determined contributions, promote sustainable development and ensure environmental integrity and transparency, including in governance . . .

NATIONAL COMMITMENTS: REDUCING AND REMOVING GHG EMISSIONS

A **nationally determined contribution** (NDC) = national emission reductions target set by Parties of the Paris Agreement

- NDC is submitted to the UNFCCC's online NDC Registry.
- Parties are responsible for tracking and reporting on their NDC implementation progress and updating and reviewing their NDCs.

A **mitigation outcome** is a quantified in greenhouse gas emissions achieved relative to an emissions baseline, or an enhancement in removals relative to a baseline of removals.

- Article 6 – references real, verified, and additional offset/credit units that can be traded between countries through the articulation: **Internationally Traded Mitigation Outcomes (ITMOS)**

What activities can produce tradeable offsets? Intial considerations

Two key considerations to consider:

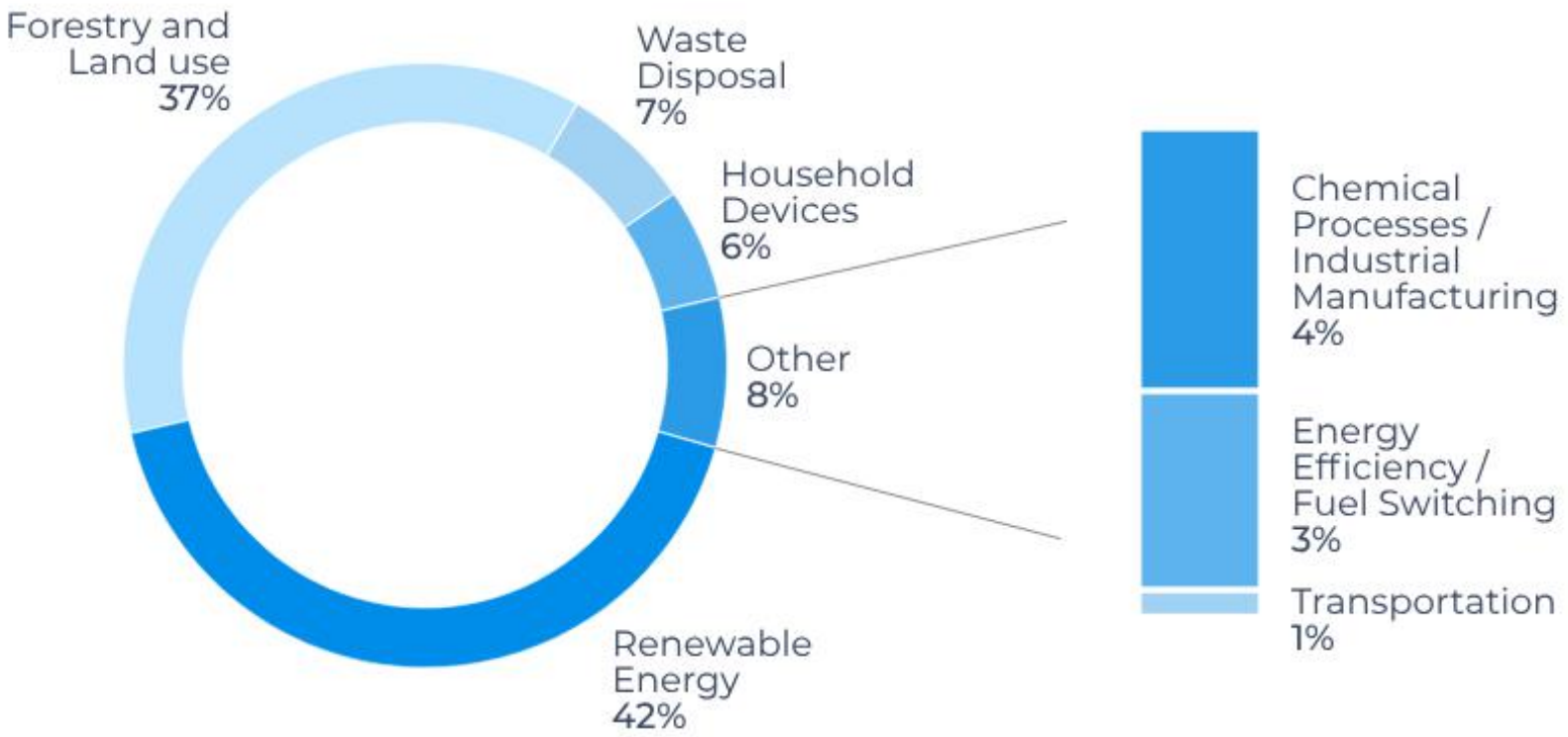
Measurability

- Use of recognised methodologies.
- Calculations based on scientific / imperically-based data.

Verification

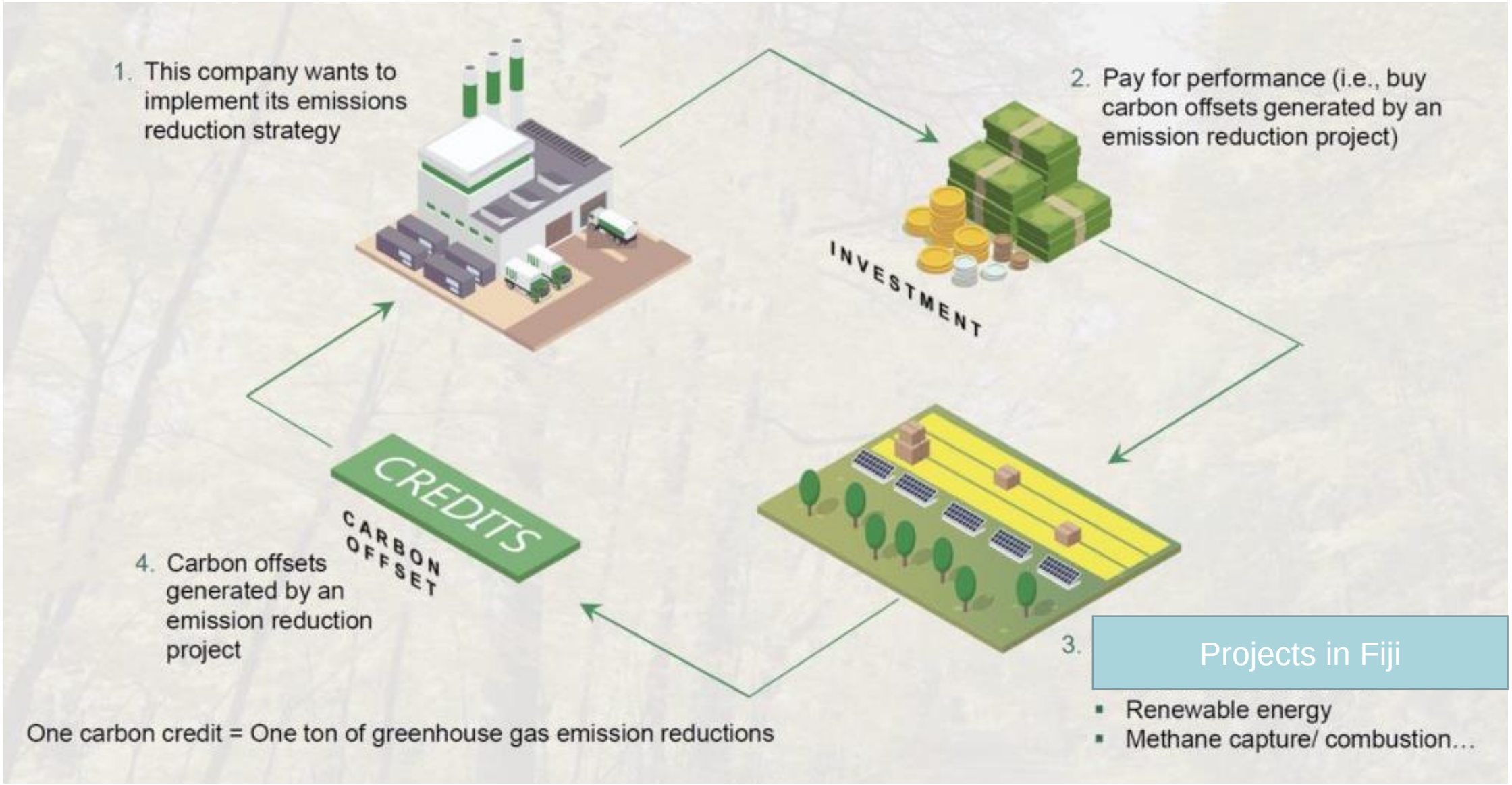
- Projects are montiored, reported, and verified by a credibile third-party.

WHAT IS BEING TRADED?



2019 Data – Ecosystem Marketplace

How?


1. This company wants to implement its emissions reduction strategy
2. Pay for performance (i.e., buy carbon offsets generated by an emission reduction project)
INVESTMENT
3.
4. Carbon offsets generated by an emission reduction project
CREDITS
CARBON OFFSET
One carbon credit = One ton of greenhouse gas emission reductions
Projects in Fiji
Renewable energy
Methane capture/ combustion…

BASIS CONCEPT 1:**ENVIRONMENTAL INTEGRITY**

Environmental integrity is a key principle and concept under the Paris Agreement

It is not well defined – but alludes to the environment being 'unimpaired', intact or in a functional and healthy state of being.

Environmental integrity is understood as being 'protected' when international transfers of carbon market units lead to an overall lowering of aggregate global emissions or maintain emissions at existing levels

Environmental integrity is understood (in relation to carbon markets) to be protected by

1. proper accounting,
2. the quality of units generated (i.e. whether the mechanism ensures that the issuance or transfer of units leads to emission reductions in the transferring country)
3. the ambition and scope of the mitigation target of the transferring country; and incentives or disincentives for future mitigation action, such as possible disincentives for transferring countries to define future mitigation targets less ambitiously or more narrowly in order to sell more units. I.E. – must align with NDC achievement

BASIS CONCEPT 2: **ADDITIONALITY**

- "Additionality" means that a given project activity is "additional" to what would otherwise have happened – the emission reductions from a planned activity would not take place if the possibility of crediting and investment that comes with Article 6 engagement were not available.
- **An activity must be additional to protect environmental integrity.**
- If an activity is *not* additional (those reductions were going to happen anyway, due to a planned project, planned reductions, or a legal requirement) and those reductions are credited, they will not represent "real and additional" reductions. If those credits are then transferred to another Party, for use toward an NDC, that acquiring Party will be trying to offset its emissions with credits that do not represent actual emission reductions. This undermines environmental integrity.

BASIS CONCEPT 3: **CORRESPONDING ADJUSTMENT**

- Refers to the need to adjust countries emissions levels when reporting on progress against their NDC to reflect the transfer or receipt of mitigation outcomes
- “Corresponding adjustments” are an accounting process intended to **avoid double counting** of the same internationally transferred mitigation outcomes (ITMOs) by both the transferring Party and the Party using these mitigation outcomes.
- Applicability can vary

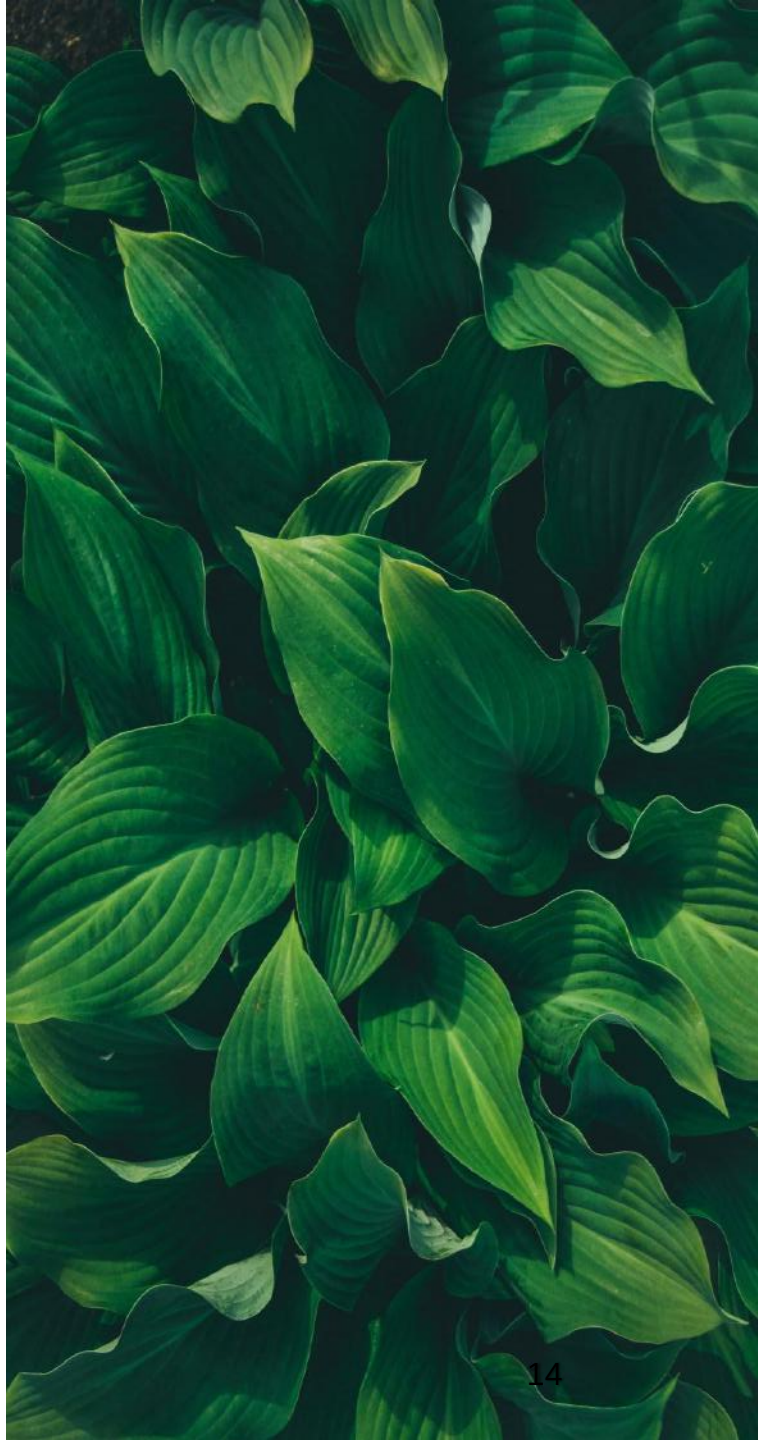
BASIS CONCEPT 4: **AVOIDING 'LEAKAGE'**

If an Activity that creates offsets/credits results in an increase in emissions elsewhere – this increase in emissions that cancels out the reduction is referred to as **carbon leakage.**

For example – if a community-based project in district A helps increase carbon sequestration from the local environment through afforestation and the reduction of logging activities in district A but the reduction in logging simply results in increased deforestation in district B – then the activity suffers from carbon leakage.

RISK OF REVERSAL / PERMANENCE

- If a GHG reduction or removal is "reversed" (i.e., GHGs are subsequently emitted so that no net reduction occurs) then it no longer serves an 'offset' function.
- Most projects expect the activity to guarantee permanence for 100 years (or less, in some cases) to be considered "permanent.". However, scientifically, anything less than a full guarantee against reversals into the indefinite future is not "permanent."



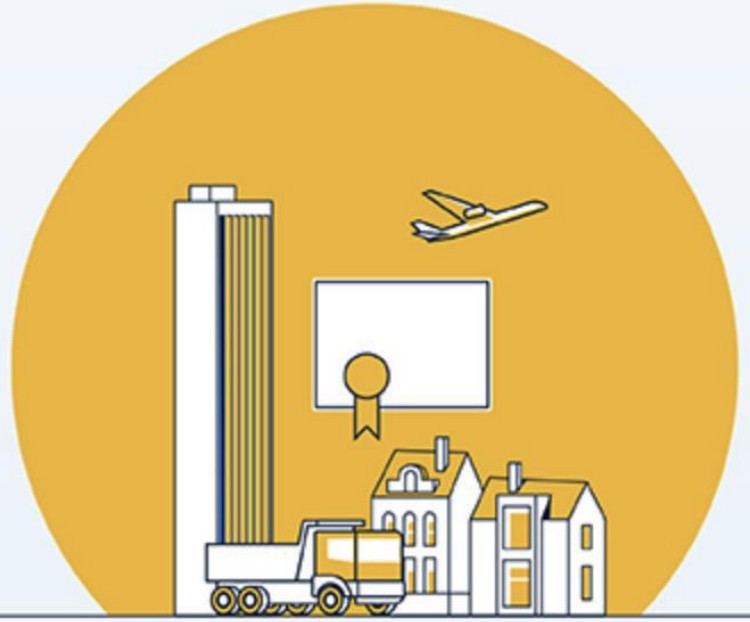
Compliance Carbon Markets

Mandatory systems regulated by government organizations to cap emissions for specific industries.

Voluntary Carbon Markets

Where carbon credits can be purchased by those that voluntarily want to compensate for their emissions.

2021



Market size 2021

Compliance

$899B

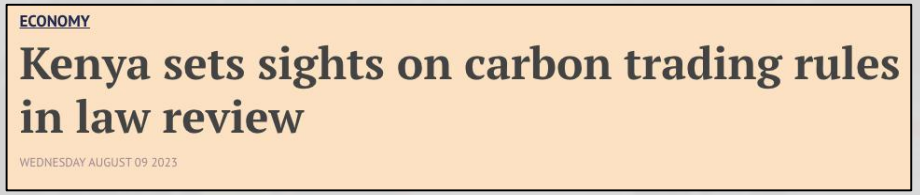
Voluntary

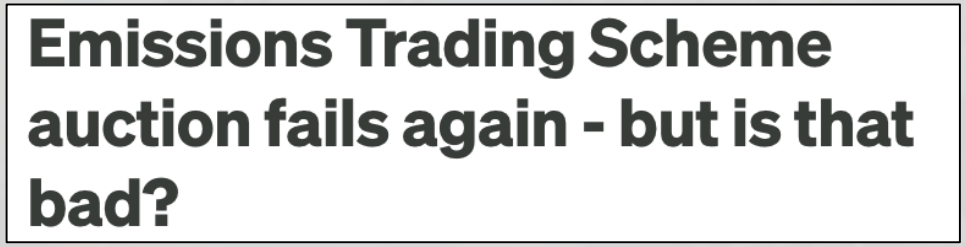
$2B

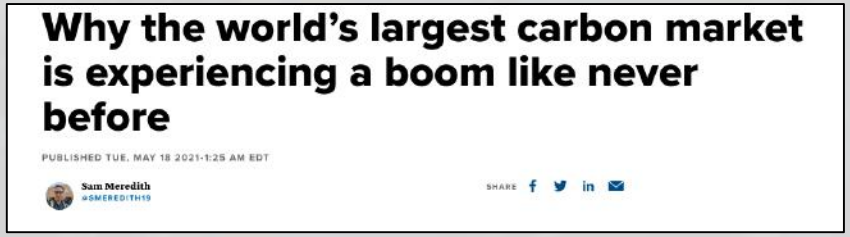
Sources: Refinitiv, Ecosystem Marketplace

2023: The Present

Carbon Markets are developing rapidly but remain in a transitional ‘technical and politcal’ state







Thank you

Climate Change Division

Office of the Prime Minister